WHAT IS CLAIMED IS:

1. A process for producing an oxidized polysaccharide derivative, comprising:

pretreating a polysaccharide to enhance a water solubility thereof; and

oxidizing the pretreated polysaccharide with hypochlorous acid or a salt thereof in the presence of a nitroxyl compound.

2. The process according to Claim 1, wherein the nitroxyl compound is a di-tert-alkylnitroxyl compound.

3. The process according to Claim 1, wherein the pretreatment for enhancing the water solubility is carried out by gelatinizing an α-bonded polysaccharide.

4. The process according to Claim 1, wherein the pretreatment for enhancing the water solubility is carried out by mercerizing a β-bonded polysaccharide.

5. The process according to Claim 1, wherein the oxidization is carried out at a pH of 7 to 11.

6. The process according to Claim 1, wherein the oxidization is carried out in the presence of bromine, a bromide, iodine or an iodide in an amount of less than 40 mol% of a glucopyranose and/or glucofuranose unit constituting the polysaccharide.

7. The process according to Claim 1, wherein the oxidization is carried out in the absence of bromine, a bromide, iodine or an iodide.

8. The process according to Claim 1, wherein the polysaccharide is selected from the group consisting of starch, amylose, amylopectin, pectin, protopectin, pectic acid, cellulose and derivatives thereof.

9. A high water-absorbing resin comprising an oxidized polysaccharide derivative as defined in Claim 1.

10. The high water-absorbing resin according to Claim 9, wherein the weight-average molecular weight of the oxidized polysaccharide derivative is 200,000 or more.

11. A process for producing an oxidized polyglycosamine derivative, comprising:

pretreating a polyglycosamine to enhance a water solubility thereof; and

oxidizing the pretreated polyglycosamine with hypochlorous acid or a salt thereof in the presence of a nitroxyl compound.

12. The process according to Claim 11, wherein the nitroxyl compound is a di-tert-alkylnitroxyl compound.

13. The process according to Claim 11, wherein the polyglycosamine is pretreated by controlling an acetylation degree of an amino group of the polyglycosamine to enhance the water solubility.

14. The process according to Claim 13, wherein the acetylation degree of the polyglycosamine is 0.3 or higher.

15. The process according to Claim 1, wherein the polyglycosamine is selected from the group consisting of chitin, chitosan, polygalactosamine, hyaluronic acid, chondroitin and chondroitin sulfate, and derivatives thereof.

16. The process according to Claim 1, wherein the oxidization of the pretreated polyglycosamine is carried out at a pH of 7 to 11.

17. The process according to Claim 1, wherein the oxidization is carried out in the presence of bromine, a bromide, iodine or an iodide in an amount of less than 40 mol% of a glucopyranose and/or glucofuranose unit constituting the polyglycosamine.

18. The process according to Claim 1, wherein the oxidization is carried out in the absence of bromine, a bromide, iodine or an iodide.

19. An oxidized polyglycosamine derivative having a molecular weight of 100,000 or more, in which 40% or more of primary alcohol groups of repeating units are oxidized into carboxyl groups.